Transfer of the Lion *Panthera leo* from Appendix II to Appendix I. Proponent: Kenya.

Summary: The Lion *Panthera leo* occurs in sub-Saharan Africa and Asia. The Asiatic subspecies *Panthera leo persica* is included in CITES Appendix I while the African population is included in Appendix II under the general listing of the family Felidae. The Lion population in Africa has undoubtedly decreased in the past three decades, although the scale of this decrease is far from clear. A very general "guesstimate" of 200 000 animals was made for the continent-wide population in 1975; another estimate, based on expert judgement and modelled habitat availability, was of ca 76 000 in 1980. In the mid-1990s, a general estimate of 30 000 to 100 000 was made. A 2002 figure, based on estimates for some 144 populations and further extrapolation, was of 39 000 Lions (range 29 000 to 47 000) while a 2004 incomplete estimate of 100 known populations was of 16 500 to 30 000. Each of these has used different methodologies and it is certainly likely that the 1975 figure over-estimated the population. The recent IUCN re-evaluation of Lion status has proposed a classification of Vulnerable for the global population on the basis of a decline of between 30% and 50% over three generations, with a regional assessment of Endangered for the West African regional population. Causes of decline during the 1990s included increasing pressure from human settlement and habitat loss, with loss of human life and livestock depredation resulting in Lion persecution. East and southern Africa are now home to the majority of the continent's Lions. Over 50% of current Lion habitat is included within protected areas, Lions are becoming rare outside protected areas.

Reported international trade in the African Lion is composed mainly of hunting trophies and skins. The majority of exports are reported from the southern African countries of Namibia, South Africa, Tanzania, Zambia and Zimbabwe. In these areas, trophy hunting is seen as a means of providing economic incentives to conserve wild areas and species. However, concern has been voiced about the sustainability of current rates of trophy hunting of Lions. Targeting prime males can reportedly result in a rapid turn-over of pride males that in turn reduces cub survival. Recently, Botswana instituted a moratorium on trophy hunts. In areas around Hwange National Park, Zimbabwe, quotas have been significantly reduced. Whilst new research suggests that the sustainability of trophy hunting can be increased by targeting males that have completed their reproductive period, such practices are apparently not yet widespread. The Animals Committee agreed to consider undertaking a Significant Trade Review of the species after CoP 13. Such a review would allow the basis for quota setting for Lion trophies to be investigated.

The proponent seeks to include *Panthera leo* in Appendix I in accordance with Resolution Conf 9.24, Annex 1, Criterion C i) due to an ongoing decline in the number of individuals in the wild and with Criterion Ai) and ii) for the populations of West and Central Africa, which are also small and fragmented.

Analysis: The African Lion still has a very wide though increasingly fragmented range. Its population is also still reasonably large. On this basis, the population as a whole does not appear to meet Criteria A or B of Annex 1 of Resolution Conf. 9.24 for inclusion in Appendix I. With regard to Criterion C, the population has undoubtedly declined markedly in the past few decades, although in the absence of reliable historical information and given the patchiness of recent data, it is difficult to say exactly how steep this decline has been. However, the best available information indicates that the decline is likely to have been 30-50% in 20 years, or somewhat less than that given in the guidelines in Resolution Conf. 9.24. These guidelines suggest as appropriate for inclusion in Appendix I a 50% decline in two generations (or ca 13 years in the case of the Lion). Inclusion of the African Lion population in Appendix I would be likely to have an effect on trophy hunting in some range States. This may in turn have an economic impact on areas where trophy hunting takes place and on the management of the species. In cases of uncertainty, Resolution Conf. 9.24 Annex 4 recommends Parties to act in the best interests of the conservation of the species.

Information provided and statements made by proponents in the Supporting Statement	**Comments, observations and additional information provided in the review process**

Taxonomy

Information provided and statements made by proponents in the Supporting Statement	Comments, observations and additional information provided in the review process
Range	
Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African republic, Chad, Congo, Cote d'Ivoire, Democratic Republic of Congo, Eritrea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau?, Kenya, Lesotho, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda?, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe.	
IUCN Global Category	
VU C2a(i).	*Proposed re-evaluation: VU 2abcd (IUCN, in prep.).* *Proposed category for isolated West African regional population EN C2ai (IUCN,* in prep.*).*

Biological criteria for inclusion in Appendix I

A) Small wild population

(i) Population or habitat decline; (ii) small subpopulations; (iii) one subpopulation; (iv) large population fluctuations; (v) high vulnerability due to biology or behaviour

A review of available information published in 1994 provided a pan-Africa estimate of 23 000 Lions (range 16 500-30 000). The available information suggests that 43% of the population is now concentrated in four sub-populations within three range States and that populations in 45% of locations contain 70 or fewer animals. Minimum Viable Population (MVP) sizes are not available.	*Myers (1975) provided a guesstimate of 200 000 African Lions at that time. Using a GIS-based model calibrated by Lion experts and taking account of factors that are known to reduce Lion populations, Ferreras and Cousins (1996) estimated the size of the African Lion population to be 75 800 in 1980. In the early 1990s, another general estimate of 30 000 to 100 000 was presented (Nowell and Jackson, 1996). In 2002 estimates for 144 Lion populations together with extrapolations for areas where Lion status was unknown were compiled to provide a pan-African estimate of 39 000 Lions (range 29 000 to 47 000) (Chardonnet, 2002). Another study published in 2004 collected numbers of 100 Lion populations compiled from questionnaires and provided an incomplete estimate of 16 500 to 30 000 Lions (Bauer and Van der Merwe, 2004). The 2004 study was not fully comprehensive as populations for which numbers were not known at all were excluded from the total. Of the populations for which estimates were included, 30% of the estimates were based on scientific surveys and the remaining 70% were based on expert opinion or guesstimate (Bauer and Van der Merwe, 2004).*

Information provided and statements made by proponents in the Supporting Statement	Comments, observations and additional information provided in the review process
B) Restricted area of distribution **(i) Fragmented or localised population; (ii) large fluctuations in distribution or subpopulations; (iii) high vulnerability due to biology or behaviour; (iv) decrease in distribution, population, habitat or reproductive potential**	
The size of the current geographic range is approximately 7.18 million km^2, but Lions are increasingly rare outside protected areas. Populations are fragmented, particularly in West Africa.	*Habitat for Lions is suspected to have declined over the past two decades. Chardonnet (2002) estimates current Lion range at approximately three million km^2, with about half this area having some form of protected status. The highest rate of habitat decline is described from West Africa (39%), with lower rates for Central (18%), Southern (16%), and East (9%) Africa (Chardonnet, 2002).* *Bauer and Van der Merwe (2004) indicate that populations are small and fragmented in West and Central Africa but that the species still occurs widely in East and Southern Africa.*
C) Decline in number of wild individuals **(i) Ongoing or historic decline; (ii) inferred or projected decline**	
In 1996 an educated guess put the African Lion population at 30 000 to 100 000. In 2004 the population was estimated to be 16 500 to 30 000 Lions Africa-wide. Recognising that the 1996 and 2004 population estimates are not directly comparable, the proponent comments that the population estimates suggest a 45-70% decline. Six examples of areas where Lion numbers are estimated to have decreased are presented in the Supporting Statement.	*The 1996 estimate appears to have been based on inputs from 1991 and was at best a "guesstimate". The 2004 estimate excluded a number of populations. Despite the use of different methodologies, it is clear that Lion numbers in Africa have declined, but the extent of decline is less clear. In re-assesing the Red List status of the African Lion, the IUCN SSC Cat Specialist Group have concluded that it is likely that previous population estimates were too high, and that a decline of over 30%, but less than 50% over two decades, or three generations, is likely to be more accurate, with most Lions being lost from West and Central Africa (IUCN,* in prep., *2004).* *A case study from Etosha National Park suggests that Lion numbers may fluctuate over time, in response to climatic conditions (Berry, 2003).*
Trade criteria for inclusion in Appendix I	
The species is or may be affected by trade	
The most frequent items in international trade are trophies, skulls and skins, according to CITES Annual Report data. The population estimates suggest a 45-70% decline. Trophy exports have only declined by 15.7% compared with the much higher estimated population declines. The proponent suggests this indicates that trophy hunting may be having a much greater impact today than in 1996. Nationally, Lion parts, particularly bone and fat, are used in traditional medicines and Lion parts are also used for other traditional practices in Africa.	*Trophy hunting for Lions is allowed in 40% of range States (13 out of 32). Analysis of CITES reported trade indicates that between 1993-2002, Zimbabwe, Tanzania and South Africa each exported on average over 100 Lion trophies per year during the ten-year period. Botswana, Cameroon, Mozambique, Namibia and Zambia exported on average over ten trophies per year each, and 12 other range States exported on average fewer than ten per year each. Noting that population data presented in Bauer and van der Merwe (2004) are far from complete, a comparison of annual reported trophy exports over the last ten years (taken from the proposal) with minimum estimates of population size indicate the following rate of harvest for international trophies in selected countries: Burkina Faso 9%; Botswana 1%; Tanzania 3.6%; South Africa 4.6%; Zambia 3.1%; Zimbabwe 12.4%. A precautionary level of harvest is thought to be around 4%, but this will vary depending on local factors. Tanzania, South Africa, Zimbabwe and others use revenues derived from trophy hunting to directly support conservation and to build local support for Lion conservation (Frank, 2004; Hutton, 2004; Nowell, 2004; Packer, 2004).*

Information provided and statements made by proponents in the Supporting Statement	Comments, observations and additional information provided in the review process
	Researchers in some of the main trophy hunting countries have expressed concern that hunting might have been unsustainable in some areas (MacDonald, cited in Nolin, 2003). Concern was expressed that quotas could be unsustainable in the Selous (Tanzania) if filled, but no evidence has been provided that they had been filled (Creel and Creel, 1997). *Botswana imposed a moratorium on Lion hunting in 2002 and the quota outside Hwange National Park in Zimbabwe was significantly reduced. These restrictions have been used to support the argument that trophy hunting is unsustainable. However, reviewers believe that trophy hunting is a lesser threat to Lion populations than human conflict with Lions (Frank, 2004; Packer, 2004). In addition Whitman* et al.*, (2004) have used modelling to demonstrate that if trophy hunting is limited to the removal of older males then the rate of reproduction will not be harmed.* *Nowell (2004) calculates from the proposal that an annual average of 919 skulls, skins, and trophies were reported as exports during a four-year period from 1999-2002. Using Chardonnet's (2002) minimum estimate of hunting areas within Lion range as 410 462 km^2, Nowell calculates that dividing recent annual exports by this range results in an offtake of approximately 0.45 Lions per 1 000 km^2. She cites Whitman* et al.*, (2004) who suggested that a level of three male Lions per 1 000 km^2 could be a guideline for a sustainable hunting quota in Tanzania, and concludes "this rough calculation does not set off alarms that current trophy hunting levels threaten the Lion population, although the sustainable offtake would be lower in parts of Africa where Lion densities are lower".* *A comparison of the Lion population numbers compiled by Bauer and van der Merwe (2004), which were incomplete, with annual average net trophy export numbers from 1992 – 2003 indicates that the percentage offtake for trophies is highest in southern and eastern Africa. The West African minimum population size equals 805 Lions with ten trophies exported annually (*i.e. *ca one trophy per 80 Lions); the Central African minimum population equals 950 Lions with 18 trophies exported annually ca. one trophy per 50 Lions); the East African minimum population equals 11 112 Lions with 262 trophies exported annually (ca 1 trophy per 40 Lions); the Southern African minimum population equals 9 836 Lions with 352 trophies exported annually (ca one trophy per 30 Lions).*

Other information

Threats

Human–Lion conflict resulting in Lion persecution; political instability; reduction in prey base; disease; and unsustainable trophy hunting quotas.	*Reviewers concur that the major threat to Lion populations is conflict with human populations (Chardonnet, 2004; Des Clers, 2004; Frank, 2004; Hutton, 2004; Nowell, 2004; Packer, 2004).* *Disease outbreaks during the 1990s do not appear to have had lasting effects on population numbers (Frank, 2004; Packer, 2004; Government of South Africa's comments on the proposal).*

Conservation, management and legislation

According to information from Nowell and Jackson (1996), the species has no legal protection in six	*Lions are protected in South Africa, but the degree varies between the Provinces. Each Province has its own*

Information provided and statements made by proponents in the Supporting Statement	Comments, observations and additional information provided in the review process
range States; hunting is prohibited in ten range States, and regulated or restricted to problem animals in a further 18 range States, of these, three allow trophy hunting. In addition both Namibia and South Africa also allow trophy hunting. Botswana instituted a moratorium on trophy hunting from 2001-2005. With regard to population monitoring, according to Bauer and Van der Merwe (2004), regionally the following proportions of extant populations do not appear to be the subject of regular monitoring: West and Central Africa, 18 out of 21 populations not monitored; East Africa, 16 out of 27 populations not surveyed recently; Southern Africa, 21 out of 41 populations not surveyed recently. With regard to assessing the impact of trophy hunting, the largest populations in South Africa and Zimbabwe appear to be monitored; but the lack of recent monitoring of the Selous population in Tanzania is of concern.	*provincial nature conservation ordinance and there are slight differences in the terminology used. Permits are required to hunt, shoot, trade in, keep, donate, and sell Lions in all provinces. In South Africa provincial nature conservation bodies are responsible for administration of the sport hunting industry. However harvest levels are effectively set by landowners, on the basis that it is in their interest to ensure that use is sustainable (TRAFFIC East/Southern Africa, 2004).* *Botswana has imposed a moratorium on trophy hunting in 2001, but the basis for this is not clear.* *In Namibia, the Ministry of Environment and Tourism retains ownership of wildlife and establishes quotas on the basis of population survey, monitoring data and questionnaires (TRAFFIC East/Southern Africa, 2004).* *In Tanzania, quotas are set by the Wildlife Division of the Ministry of Natural Resources and Tourism. Quotas for hunting blocs are based on, for example, data available on size of area, habitat type, hunting offtake in previous years and estimates of species density (TRAFFIC East/Southern Africa, 2004). Baldus and Cauldwell (in prep.) report that the Wildlife Division is developing new management procedures for Lion hunting. From 2004 onwards it is planned that only Lions six years or older may be hunted.* *In Zimbabwe responsibility for quota setting is being gradually devolved from the Department of National Parks and Wildlife Management (DNPWLM) to land holders and community associations, but the DNPWLM still establishes quotas for the State-owned safari areas. Quota setting relies on ground surveillance, expert knowledge and adaptive management. Lion quotas are reportedly set at 8% of the population (TRAFFIC East/Southern Africa, 2004).*
Similar species	
The Asiatic Lion *Panthera leo persica* is already included in Appendix I.	
Captive breeding	
Over 1 000 animals are maintained in captivity according to records maintained by the International Species Inventory System (ISIS). South Africa has now prohibited the captive breeding of Lions for “canned” trophy hunts.	*South Africa has 800 Lions in captivity.*
Other comments	
Inclusion of the taxon in Appendix I would not preclude trophy hunting, as export quotas could be established by the CoP in accordance with Resolution Conf. 9.21. This would provide oversight by Parties and ensure that export quotas would not be detrimental to the survival of species. Within the two-week comment period, Kenya received three responses. Ethiopia supported the proposal. Namibia and South Africa both opposed the proposal on the grounds that Namibia’s population is stable or increasing and in South Africa, much of the national populations occurs in protected areas, where hunting is prohibited.	*In Tanzania a review of newspaper articles etc., over a 15-year period indicates that on average 50 people are reported killed annually by Lions (Baldus* et al., *2003).* *There is concern that inclusion in Appendix I would make trophy imports more difficult under certain domestic legislation and could impact schemes where trophy hunting is contributing to conservation (Frank, 2004; Chardonnet, 2004; des Clers, 2004; Hutton, 2004; Nowell, 2004).* *Further information would be useful on the basis for management and quota setting in Botswana, Burkina Faso, the Central African Republic, Cameroon, South Africa, Tanzania, Zimbabwe and Zambia (Nowell, 2004).* *The populations in West /Central Africa are in need of*

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	greater conservation support and low cost monitoring (Bauer et al., *2001).* *Kenya proposed the Lion be considered for review under the Significant Trade Review Process, and the Animals Committee agreed to review the basis for this request at AC 21, after CoP13 (See ENB 2004). A similar proposal was put forward by TRAFFIC and IUCN (TRAFFIC, 2004).* *The African Lion Working Group commented that the moratorium in Botswana does not necessarily guarantee positive results for the Lion populations, as the factors affecting populations vary, and some may benefit from the bans, but others will suffer through loss of local support (ALWG 2003).*

Reviewers: H. Bauer, P. Chardonnet, B. des Clers, L. Frank, J. Hutton, K. Nowell, C. Packer, TRAFFIC East/Southern Africa.

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